



Foreign &  
Commonwealth  
Office

## **A Changing Climate: The UK's Response**

**California Energy Commission  
Public Workshop  
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## **OUTLINE**

- UK Climate Change Strategies and Programs**
- European Union Efforts**
- Outcomes of G8 Summit and Path Forward**
- Other International Efforts**

## UK Climate Policy

### Necessary -

- We recognize the planet is warming, and that human activity is contributing to it.

### Achievable -

- Renewables, Emissions Trading, Energy Efficiency, Fuel Diversity

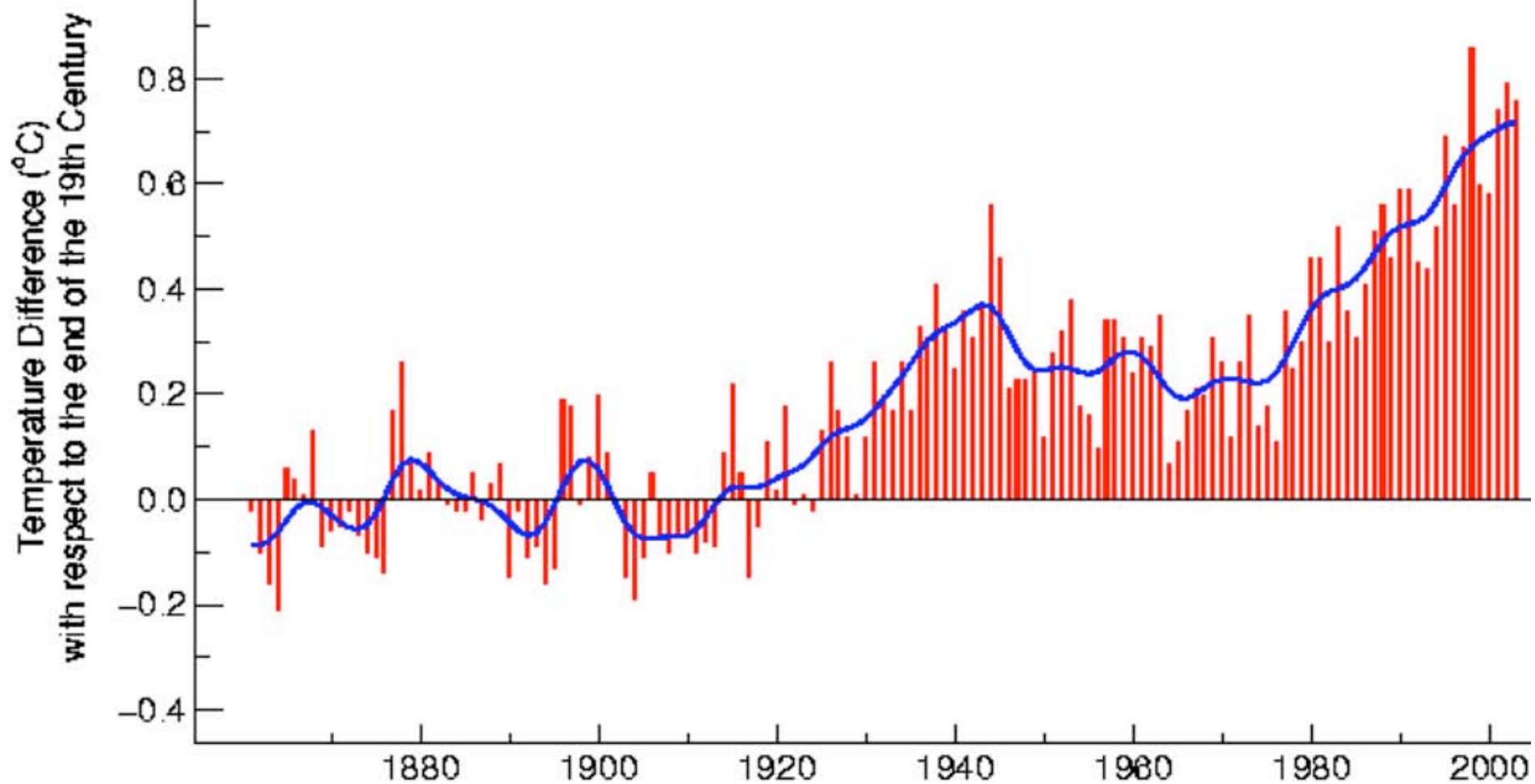
### Affordable -

- Between 1990 2005 - Emissions down 12% while GDP up 35%
- 60% reduction by 2050 = less than six month delay in GDP

**NECESSARY**



Global Average Near-Surface Temperatures 1861–2003



## Impact on UK

### Current UK Impacts of Extreme Weather Events

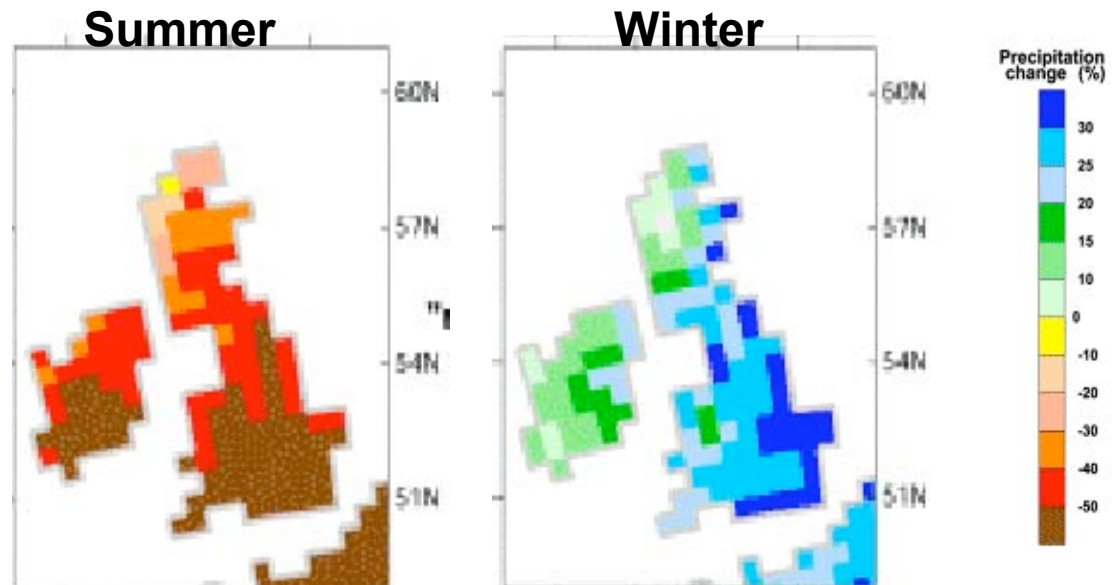
- Subsidence costs in hot summers of 1997- 2001: £3.5 billion
- Insured flood damage 2001: £750 million

### UK Impacts 2080 - No Stabilisation

Up to 80cm sea level rise

>30% more rain in winter

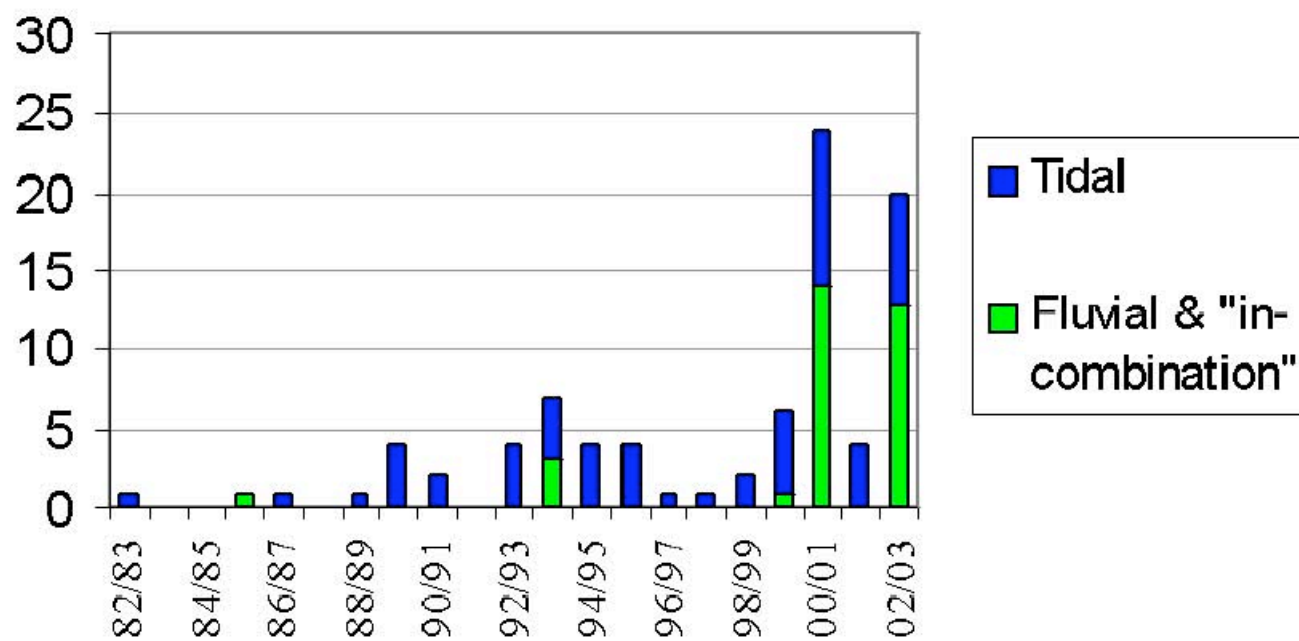
>60% less rain in summer



## River Thames Barrier



## Thames Barrier Closures - Tidal, Fluvial and "in-combination"



ENVIRONMENT  
AGENCY



## Energy: UK Context

The UK is currently a net exporter of oil and gas, but in transition.

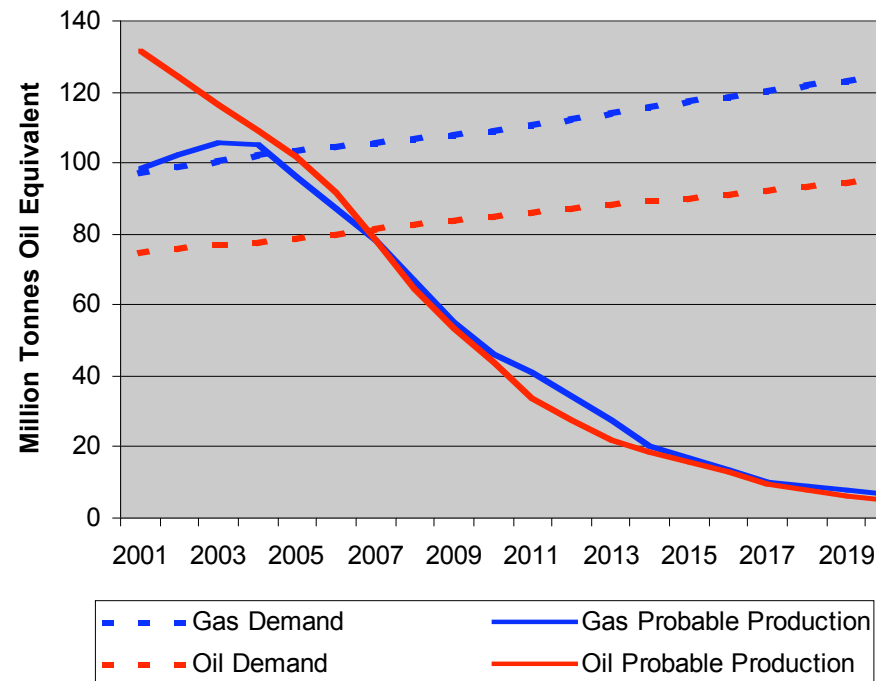
However, demand for oil and gas is widely projected to rise by 2020. Oil demand will be driven in particular by transport, gas by electricity generation.

Domestic production is projected to fall leading to rising import dependency.

The UK is projected to become a net importer of gas by 2006, and of oil by 2010 at the latest.

The UK needs to take a strategic approach to manage this transition effectively.

**UK Oil and Gas Demand and Production under Business as Usual Scenario**



Source: DTI 2002

# ACHIEVABLE



## UK 2002 Energy White Paper: 4 Key Energy Policy Objectives

### Security

To maintain reliability of energy supplies

### Environment

To put ourselves on a path to cut the UK's carbon dioxide emissions - the main contributor to global warming - by some 60% by about 2050, with real progress by 2020.

### Competitiveness

To promote competitive markets in the UK and beyond, help to raise the rate of sustainable economic growth and improve our productivity.

### Social

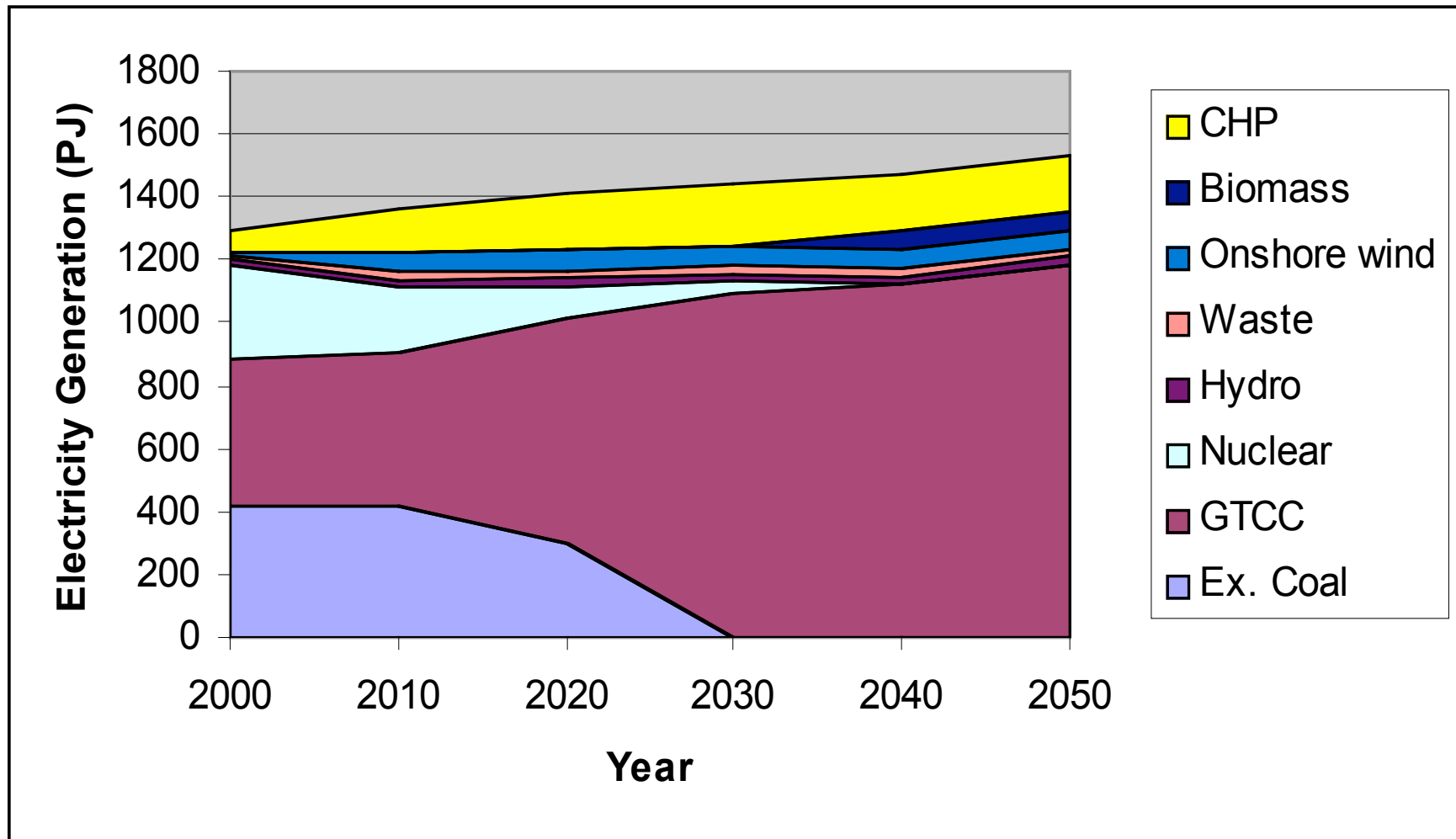
Ensure that every UK home is adequately and affordably heated

Historical self-sufficiency means UK energy policy has had a largely national/EU focus over the last 2 decades

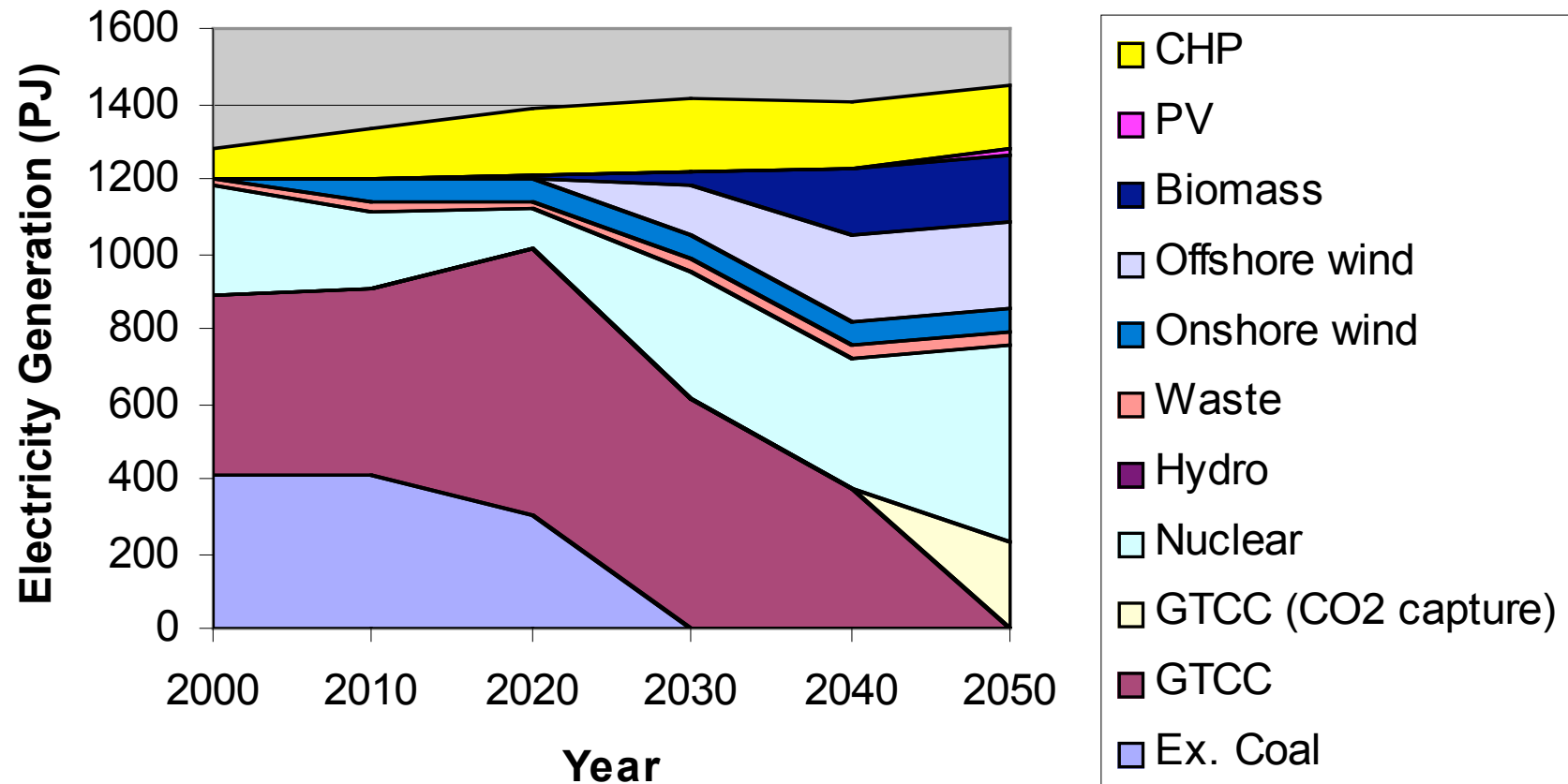
## **Making additional carbon cuts of between 15 and 25 MtC by 2020 ...through ...**

	Reductions (MTC)
Energy efficiency in households	- 4-6
Energy efficiency in industry, commerce and the public sector	- 4-6
Transport	- 2-4
Increasing renewables	- 3-5
Emissions trading	- 2-4

## The fuel mix for electricity generation – without carbon constraints



## A fuel mix for electricity generation – 60% carbon reduction in 2050

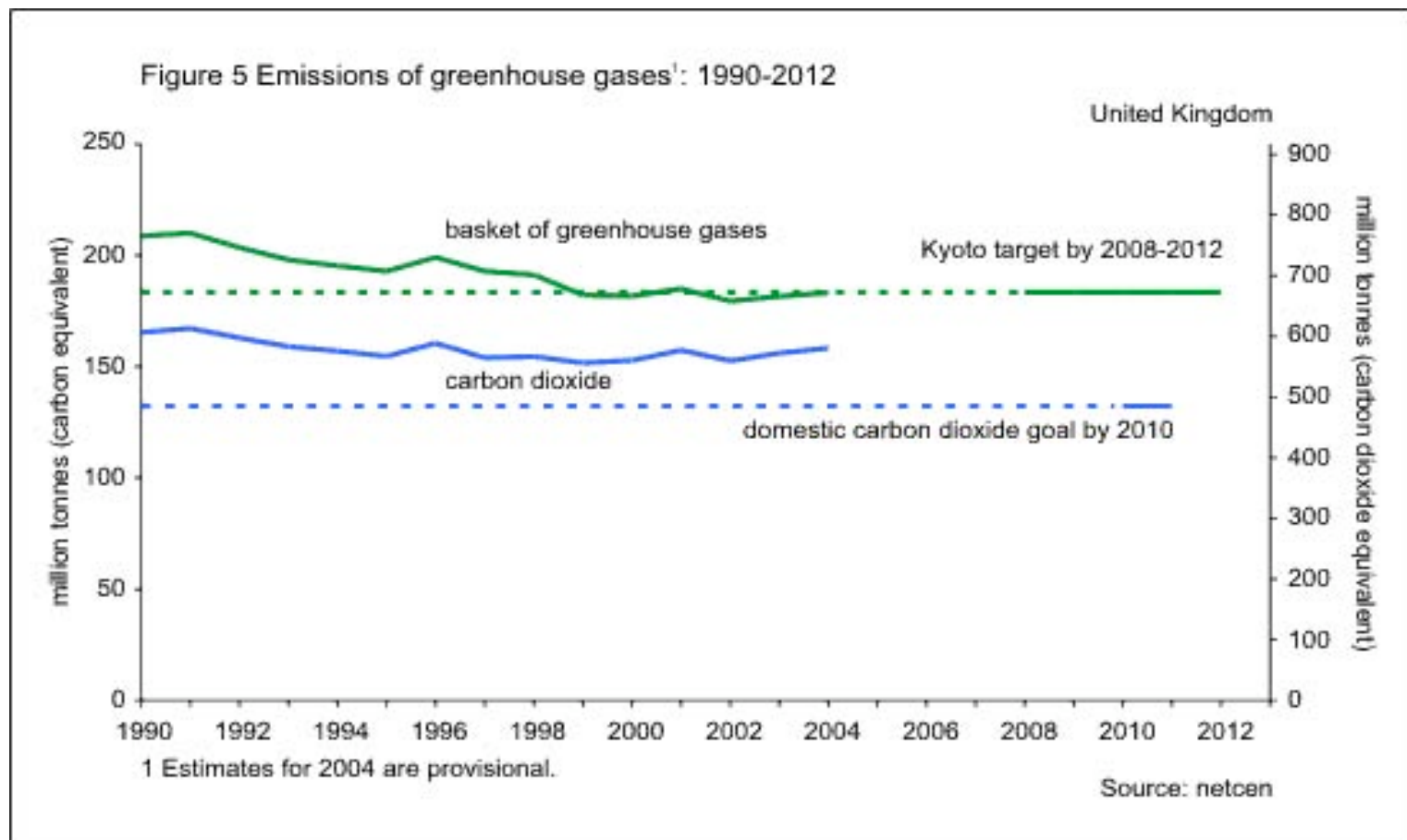


**AFFORDABLE**



## UK GHG emissions 1990 – 2012

- Annual UK emissions down 12.5% and CO2 down 4% by 2004 from 1990 levels.
- The economy grew by 35% between 1990 and 2004.
- CO2 emission intensity fell by about 33%.





# The costs of a 60% CO<sub>2</sub> reduction

- Key conclusion: provided wide international engagement, costs of order of  $\frac{1}{2}$  - 2 % of GDP in 2050.
- ... approximately 0.01-0.02 percentage points reduction on assumed GDP growth rate of 2.25% a year
- GDP 3 times as large in 2050 as now.

# The Costs of Inaction



## European floods 2002

- 37 deaths
- \$16bn direct costs

## European heat-wave 2003

- 26,000 deaths
- \$13.5bn direct costs

## UK floods, autumn 2000

- Insurance pay-out £1bn

## UK Hot summer of 1995

- Agriculture, water, retail, insurance losses £1bn

## OPPORTUNITIES FOR LEADERSHIP



## **UK Presidency of the European Union** ***July 1, 2005 - December 31, 2005***

UK's Environmental Priority:

- Keep action to tackle climate change high on the international agenda, and work with our EU partners to show progress on existing climate change targets



# **EU Emissions Trading Scheme: Update**



## **EU ETS: Timetable**

<b>Directive adopted</b>	<b>October 2003</b>
<b>Transposition deadline</b>	<b>December 2003</b>
<b>Notification of NAPs</b>	<b>March 2004 onwards</b>
<b>Final allocation decisions</b>	<b>October 2004 onwards</b>
<b>Monitoring begins</b>	<b>January 2005</b>
<b>Y1 allowances issued</b>	<b>February 2005 onwards</b>
<b>Y1 emissions reported</b>	<b>March 2006</b>
<b>Y1 allowances surrendered</b>	<b>April 2006</b>



## EU ETS: Harmonisation or subsidiarity?

Issue	Member State discretion
<b>Scope</b>	<b>None*</b>
<b>Monitoring &amp; Reporting</b>	<b>Low</b>
<b>Verification</b>	<b>Some</b>
<b>Penalties</b>	<b>Some</b>
<b>Registry</b>	<b>Low</b>
<b>Allocation</b>	<b>High*</b>



## Scope

### Energy activities

- combustion installations
- oil refineries
- coke ovens

**>12,000 installations**  
**~46% of CO<sub>2</sub> emissions**

### Ferrous metal production

### Minerals - cement, glass & ceramics

### Pulp & paper production





## **National Allocation Plans**

### **Pathway to Kyoto target**

- **Projected emissions from non-trading sector**
- **Realistic use of Kyoto mechanism**

### **Equitable allocation below likely need**

- **Potential for cost-effective reductions**
- **State aid issues**

### **Highly controversial process within/between Member States**

### **Commission decisions**



## **NAPs: ECOFYS analysis for UK**

**Allocation generally below projected emissions**

- **But lack of information on projections in NAPs**

**Emission reductions required from EU ETS installations not significant**

- **Reliance on other Kyoto mechanisms favoured**

**Differing interpretations of scope will distort competition**



## **Impacts of EU ETS**

### **Competitiveness: Carbon Trust/OXERA report**

- **No significant threat to competitiveness for most industrial sectors**
- **Potential to profit for several sectors (e.g. ESI)**
- **Weak and inconsistent implementation problematic**

### **Electricity prices: ILEX study**

- **100% cost pass through assumed for many MS**
- **UK will only experience average price increases**



## **Preparation of NAPs for Phase 2 (2008-12)**

- **Deadline for submission June 2006**
- **Incorporate lessons learned from Phase 1 NAPs**
- **Consider total quantity of allowances**
- **Allocation methodology – must not undermine incentives to reduce emissions in Phase 1**



## **UK priorities for future of EU ETS**

### **Ensuring high standards across Europe**

- **Monitoring, reporting and verification**
- **Enforcement of sanctions**

### **Implementation of Linking Directive (CDM/JI credits)**

### **Inclusion of aviation emissions**

### **Links to other schemes ... July 18th Workshop in London**

### **Monitor developments in the US including RGGI, Western States, and others.**



## **Group of Eight Gleneagles Summit July 6-8, 2005**

- United Kingdom**
- United States**
- Canada**
- Germany**
- France**
- Italy**
- Russia**
- Japan**



### **Also invited:**

- European Commission**
- China**
- India**
- Brazil**
- South Africa**
- Mexico**

## International Action – G8

***“the world's greatest environmental challenge: climate change.”***

**- Tony Blair, September 2004**

**Climate Change is top priority for UK's G8 presidency in 2005**

**We aim to**

- **Build a solid foundation on the science**
- **Speed up scientific progress on technology**
- **Engage future large energy consuming nations**



## **G8 - SUMMIT OUTCOMES**

**On July 8th, Heads of State united on:**

- **Agreement on the seriousness of the problem, the evidence of the science, and the need for urgent action**
- **Plan of action including package of near-term technologies and strategies deployable to emerging economies**
- **Commitment to a new dialogue to begin November 1 in Britain**





## Concluding themes

- Addressing Climate Change and Energy Security is a national priority for the UK.
- Must work internationally on climate change: urgency and ambition (G8 & EU 2005).
- UK experience and forecasts shows that the shift to a low carbon economy is affordable: opportunity not cost.
- Opportunities for collaboration...NECESSARY, ACHIEVABLE, AFFORDABLE

## Further details...

- [www.defra.gov.uk/environment/energy/index.htm](http://www.defra.gov.uk/environment/energy/index.htm)
- <http://defraweb/environment/climatechange/index.htm>
- [www.dti.gov.uk/energy/sepn/index.shtml](http://www.dti.gov.uk/energy/sepn/index.shtml)
- [www.reeep.org](http://www.reeep.org)
- [www.g8.gov.uk](http://www.g8.gov.uk)
- [www.eu2005.gov.uk](http://www.eu2005.gov.uk)

[\*\*www.britainusa.org\*\*](http://www.britainusa.org)



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